

CLAIMS

What is claimed is:

1. An intravascular device, comprising:

an elongate member having a proximal end, a distal end, and a distal region;

a balloon having an interior chamber and being mounted on the distal region of the elongate member;

an inflation tube having an inflation lumen communicating with the interior of said balloon and an inflation port, said inflation lumen for infusing a liquid into the balloon;

a venting tube having a venting lumen communicating with the interior of said balloon and an exhaust port, said venting lumen for expulsion of gas from the interior of said balloon through said exhaust port;

a selective degassing element, positioned across said venting lumen for the expulsion of gas from the balloon through said exhaust port and for preventing the expulsion of liquid from the balloon through said exhaust port.

2. The intravascular device of Claim 1, wherein said elongate member is a catheter.

3. The intravascular device of Claim 1, wherein said elongate member is a cannula.

4. The intravascular device of Claim 2, wherein said selective degassing element is a non-mechanically actuated valve.

5. The intravascular device of Claim 4, wherein said valve is manufactured from slitted rubber.

6. The intravascular device of Claim 4, wherein said valve is manufactured from a self sealing elastomer.
7. The intravascular device of Claim 2, wherein said selective degassing element is a plug.
8. The intravascular device of Claim 7, wherein said plug is manufactured from sintered polyethylene.
9. The intravascular device of Claim 2, wherein said selective degassing element is a membrane.
10. The intravascular device of Claim 9, wherein said membrane is manufactured from Gortex.
11. The intravascular device of Claim 9, wherein said membrane is manufactured from nylon mesh.
12. The intravascular device of Claim 2, wherein said selective degassing element is a mechanically actuated valve.
13. The intravascular device of Claim 12, wherein said valve is a one-way check valve.
14. The intravascular device of Claim 2, wherein said selective degassing element is a hydrophobic filter.
15. The intravascular device of Claim 14, wherein said filter is a gas permeable membrane.
16. The intravascular device of Claim 2, wherein said selective degassing element allows the expulsion of gas and liquid from the interior of said balloon through said exhaust port when said selective degassing element is in an open position,

and prevents the expulsion of gas and liquid from the interior of said balloon through said exhaust port when said selective degassing element is in a closed position.

5 17. The intravascular device of Claim 2, wherein said selective degassing element is capable of simultaneously allowing the expulsion of gas from the interior of said balloon through said exhaust port while preventing the expulsion of liquid from the interior of said balloon through said exhaust port.

18. An intravascular device, comprising:

an inflatable member having an interior and an exterior;

10 a first lumen connecting the interior of said inflatable member and the exterior of said inflatable member, said first lumen capable of allowing the infusion of liquid from the exterior of said inflatable member into the interior of said inflatable member;

15 a second lumen connecting the interior of said inflatable member and the exterior of said inflatable member, said second lumen capable of allowing the expulsion of gas from the interior of said inflatable member to the exterior of said inflatable member;

20 a selective degassing element, said element positioned across said second lumen and capable of allowing the expulsion of gas from the interior of said inflatable member to the exterior of said inflatable member through said second lumen and capable of preventing the expulsion of liquid from the interior of said inflatable member to the exterior of said inflatable member through said second lumen.

19. An intravascular device, comprising:

a catheter or cannulae;

a balloon attached to said catheter or cannulae, said balloon having an interior and an exterior;

5 a first lumen within said catheter or cannulae, said first lumen connecting the interior of said balloon and an inflation port and capable of allowing the infusion of liquid through said inflation port into the interior of said balloon;

10 a second lumen within said catheter or cannulae, said second lumen connecting the interior of said balloon and an exhaust port and capable of allowing the expulsion of gas from the interior of said balloon through said exhaust port;

15 a selective degassing element, said element positioned across said second lumen and capable of allowing the expulsion of gas from the interior of said balloon through said exhaust port and capable of preventing the expulsion of liquid from the interior of said balloon through said exhaust port.

20. A method for degassing an intravascular device, comprising the steps of:

20 providing an elongate member having a proximal region and a distal region, a balloon mounted on the distal region, an inflation tube communicating with the interior of said balloon and an inflation port, a venting tube communicating with the interior of said balloon and an exhaust port, and a selective degassing element, said element positioned within said venting lumen for expulsion of gas from said balloon through said exhaust port and for preventing the expulsion of liquid from said balloon through said exhaust port;

opening said degassing element; and

injecting liquid into said balloon, wherein gas is purged from the balloon through said venting lumen, through said degassing element, and through said exhaust port.

21. The method of Claim 20, wherein said selective degassing element is placed in an open position by inserting a needle or hollow tube into said element.
22. The method of Claim 20, wherein said selective degassing element is placed in an open position by inserting a needle or hollow tube through said element.
23. The method of Claim 20, wherein the elongate member is a cannula.
24. The method of Claim 20, wherein the elongate member is a catheter.
25. The method of Claim 20, wherein the selective degassing element is a non-mechanical valve.
26. The method of Claim 20, wherein the selective degassing element is a mechanical valve.
27. The method of Claim 25, wherein the valve is selected from the group consisting of slited rubber, self sealing elastomer, a plug, a membrane, and a hydrophobic filter.